denticulate margin; corolla lobes are ovate-acute, shorter than tube; anthers are broadly triangular, lobes divergent at base.

The species is named in honour of Dr. M. P. Nayar, former Director, Botanical Survey of India for the contribution he has made in the field of taxonomic studies of Indian plants.

ACKNOWLEDGEMENT

The authors wish to express their gratitude to the Director, Botanical Survey of India for all facilities, valuable comments and suggestions.

G. S. Giri and S. K. Das
Botanical Survey of India, Itanagar

ON THE IDENTITY AND DISTRIBUTION OF *OLEANDRA PISTILLARIS* (SW.) C. CHR. IN INDIA

A genus of about 40 species, *Oleandra* Cav. is fairly common in America, Africa and Asia to Polynesia (Copeland, 1947). In India it is known to be represented by four species which are mainly confined to the Eastern Himalayas and South India (Clarke, 1880; Beddome, 1892). The species grow either as epiphytes or lithophytes and are characterised by the presence of long-wiry roots on the rhizome, simple lamina, sori in one row on either side of the mid-rib. During the course of the study of the pteridophytic flora of the Pithoragarh district of Kumaon, the authors collected *O. pistillaris* (Sw.) C. Chr. from near Namik (2400 m).

Although this region is accepted as a part of the Western Himalayas, it is also often termed as Kumaon Himalayas (Wadia, 1975) or Kumaon section under Lower Himalayas (Meddlicott, 1882). But the climate is undoubtedly western Himalayan and apparently the vegetation. However, some elements which are common in the Eastern Himalayas are also found in this region but they do not extend further west in the Western Himalayas. It seems to be true for *O. pistillaris* (Sw.) C. Chr. also, which is known to be common in many parts of the Eastern Himalayas (Clarke, 1880; Beddome, 1892; Panigrahi, 1960; Kachroo, 1975) but so far not recorded from Western Himalayas. Earlier reports (Clarke, 1880; Beddome, 1892; Hope, 1903, Duthie, 1906, Dhir, 1970; Bir, 1983; Punetha and Kaur, 1987) from various parts reveal that this genus is represented by only one species, *O. wallichi* (Hook.) Presl in the Western Himalayas.

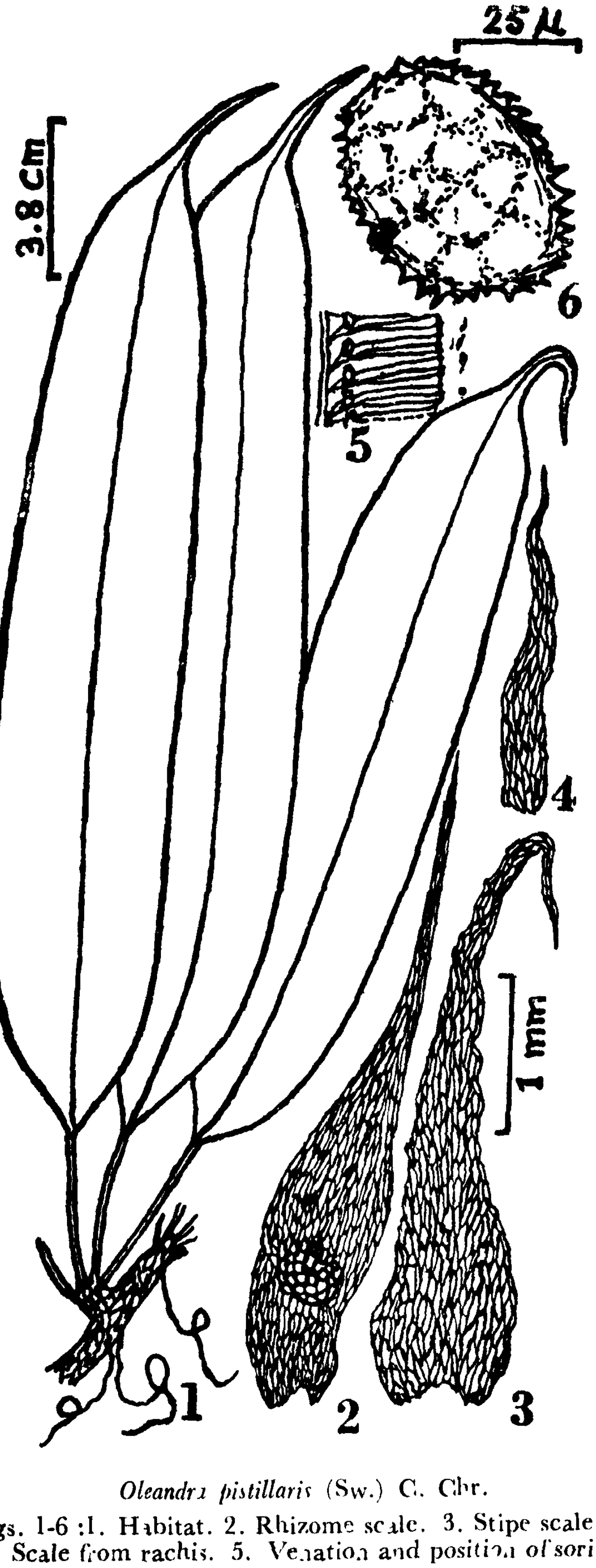
The two species can be differentiated with the help of the following key:

1a. Rhizome ascending; fronds in tufts; lamina small; rhizome scales entire ... *O. pistillaris*
1b. Rhizome creeping; fronds solitary; lamina large; rhizome scales fibrillose .. *O. wallichi*

O. pistillaris (Sw.) C. Chr., Index Fil. Suppl. 3 : 132. 1934; Holtt., Fl. Malaya 2 : 386. 1954. Basyn. *Aspidium pistillare* Sw., Schard Journ. 1800/2 : 30. 1801.

Rhizome ascending, stout, 4 mm thick, scaly; roots in clusters, wiry, to 12 cm long; stipe scaly; fronds tufted, 2-4 in one whorl, lamina simple, oblong 15-30 × 2-3.5 cm, narrowed towards base, apex acuminate, mid-rib scaly; veins once or twice forked, parallel; sori apart from mid-rib, on upper veinlets, dark brown, globose, indusiate; indusium reniform, orbicular; spores bilateral, brown, perisporiate, perispore spinulose, $65 \times 50\,\mu$, (Figs. 1-6).

This fern has been described under the name *O. neriiformis* Cav. by authors dealing



Oleandra pistillaris (Sw.) C. Chr.

Figs. 1-6 :1. Habitat. 2. Rhizome scale. 3. Stipe scale. 4. Scale from rachis. 5. Venation and position of sori. 6. Spore.

with the ferns of India (Clarke, 1880, Beddome, 1892, Panigrahi, 1960, Kachroo, 1975 ; Rao and Baishya, 1982) but Holttum (1954) clarified that the Asian species is *O. pistillaris* (Sw.) C. Chr.

Specimens are deposited in the herbarium, Department of Botany, Govt. P. G. College, Pithoragarh.

ACKNOWLEDGEMENT

Authors are thankful to the U.G.C., New Delhi for financial help.

N. Punetha and B. S. Kholia

Deptt. of Botany, P. G. College, Pithoragarh

REFERENCES

Beddome, R. H. *Handbook to the Ferns of British India, Ceylon and the Malay Peninsula with Supplement*, Calcutta. 1892.

Bir, S. S., C. K. Satija. S. M. Vasudeva and P. Goyal. *Pteridophytic flora of Garhwal Himalaya*, Dehradun. 1983.

Clarke, C. B. Ferns of Northern India. *Trans Linn. Soc.* London II Bot. 1 : 541-542. 1880.

Copeland, E. B. *Genera Filicum*, Waltham Mass, U.S.A. 1947.

Dhir, K. K. Ferns of North-Western Himalayas. ***Biblio.*** *Pteridologica* 1: 59. 1979.

Dixit, R. D. A Census of the Indian Pteridophytes. Botanical Survey of India, Howrah. 1984.

Duthie, J. F. *Cat. Plants of Kumaon*, 1906 (reprint) Dehradun. 1974.

Holttum, R. E. *Flora of Malaya*, 2 : The Ferns, Singapore. 1954.

Hope, C. W. The Ferns of North-Western India. *J. Bombay Nat. Hist. Soc.* 14 : 749. 1903.

Kachroo, P. Fern flora of Assam with some phytogeographical notes. *J. Indian Bot. Soc.* 54 : 13-26. 1975.

Meddlicott, H. B. Geology pp. 111-168 (Ed. E. T. Atkinson) *The Himalayan Gazetteer.* 1 : 1882. (reprint) Delhi. 1973.

Panigrahi, G. Pteridophytes of the Eastern India I. Enumeration of the species collected and their nomenclature. *Bull. Bot. Surv. India* 2 : 309-314. 1960.

Punetha, N. and S. Kaur. Pteridophytic flora of Pithoragarh district of Kumaon (N. W. Himalayas). *J. Econ. Tax. Bot.* 9 : 269-286. 1987.

Rao, R. R. and A. K. Baishya. *Ferns and Fern-allies of Meghalaya State, India*, Jodhpur. 1982.

Wadia, D. N. *Geology of India.* London. 1957.